GEOPHYSICAL AND GEOCHEMICAL REPORT

on the

MESABI and MESABI 2 MINERAL CLAIMS

Heffley Lake
Kamloops Mining Division
British Columbia

NTS: 92I/16E
50°51' North, 120°03' West

OWNER: R.H. McMILLAN

AUTHOR: N.C. CARTER

DATE: JULY 15,1994

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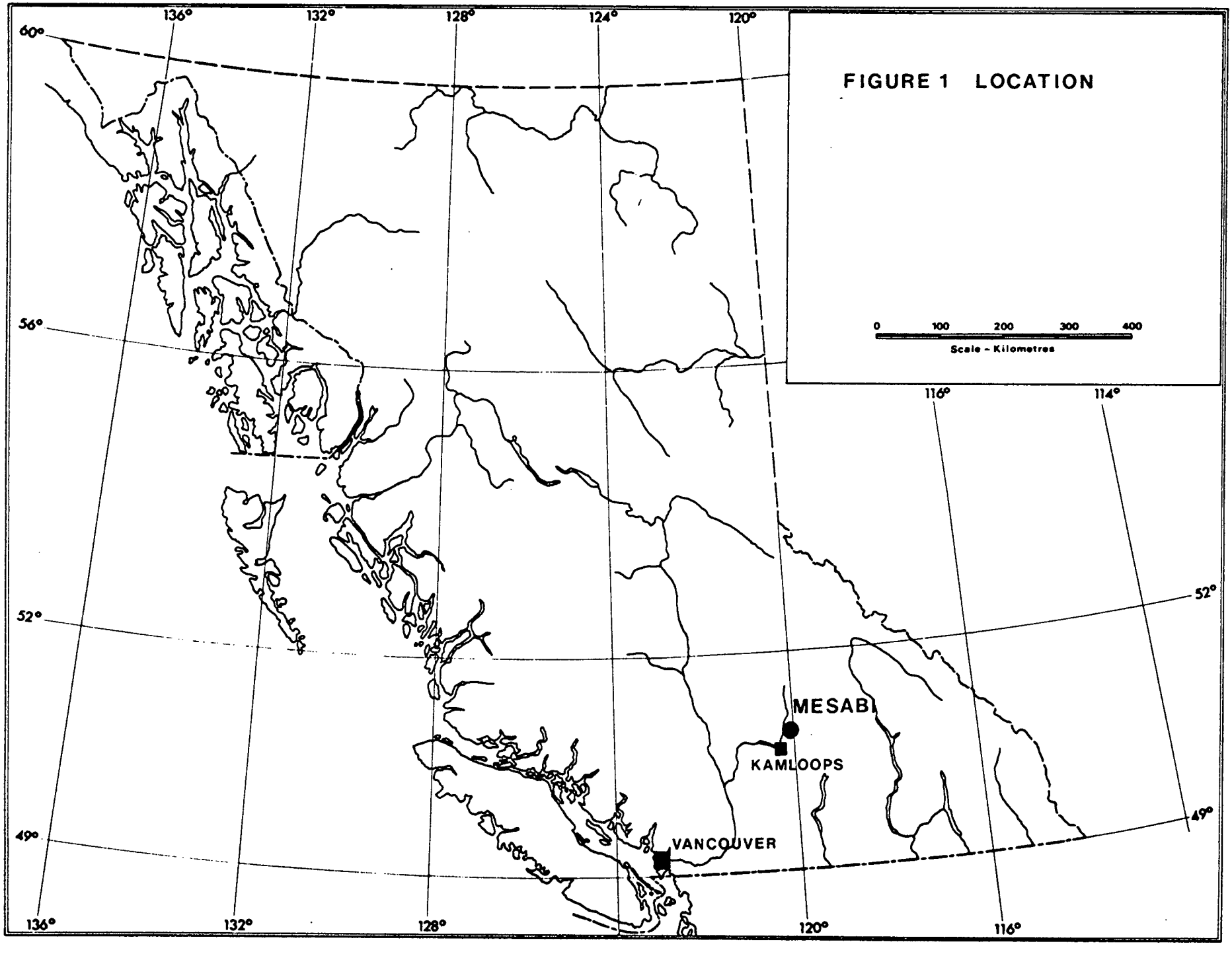
FIGURE 1 LOCATION
0 100 200 300 400
Scale - Kilometres
136°
132°
128°
124°
120°
116°
114°
60°
56°
52°
49°
MESABI
KAMLOOPS
VANCOUVER

INTRODUCTION

Location and Access

The MESABI and MESABI 2 mineral claims are situated immediately north of Heffley Lake and 25 km northeast of Kamloops in south-central British Columbia (Figure 1). The geographic centre of the property is at latitude 50°51' North and Longitude 120°03' West in NTS map-area 92I/16E.

Excellent access is afforded by a paved highway which passes through the centre of the property and links the Tod Mtn. ski resort with the community of Heffley Creek on Provincial highway 5 some 23 km north of Kamloops. Heffley Lake and the central part of the MESABI property are 17 km east of Heffley Creek (Figure 2).

Mineral Property

The MESABI property consists of two contiguous 4-post mineral claims comprising 24 mineral claim units located in the Kamloops Mining Division. The configuration of the claims is shown on Figure 3 and details are as follows:

Claim Name	Units	Record Number	Date of Record
MESABI	20	317246	April 21,1993
MESABI 2	4	324705	April 13,1994

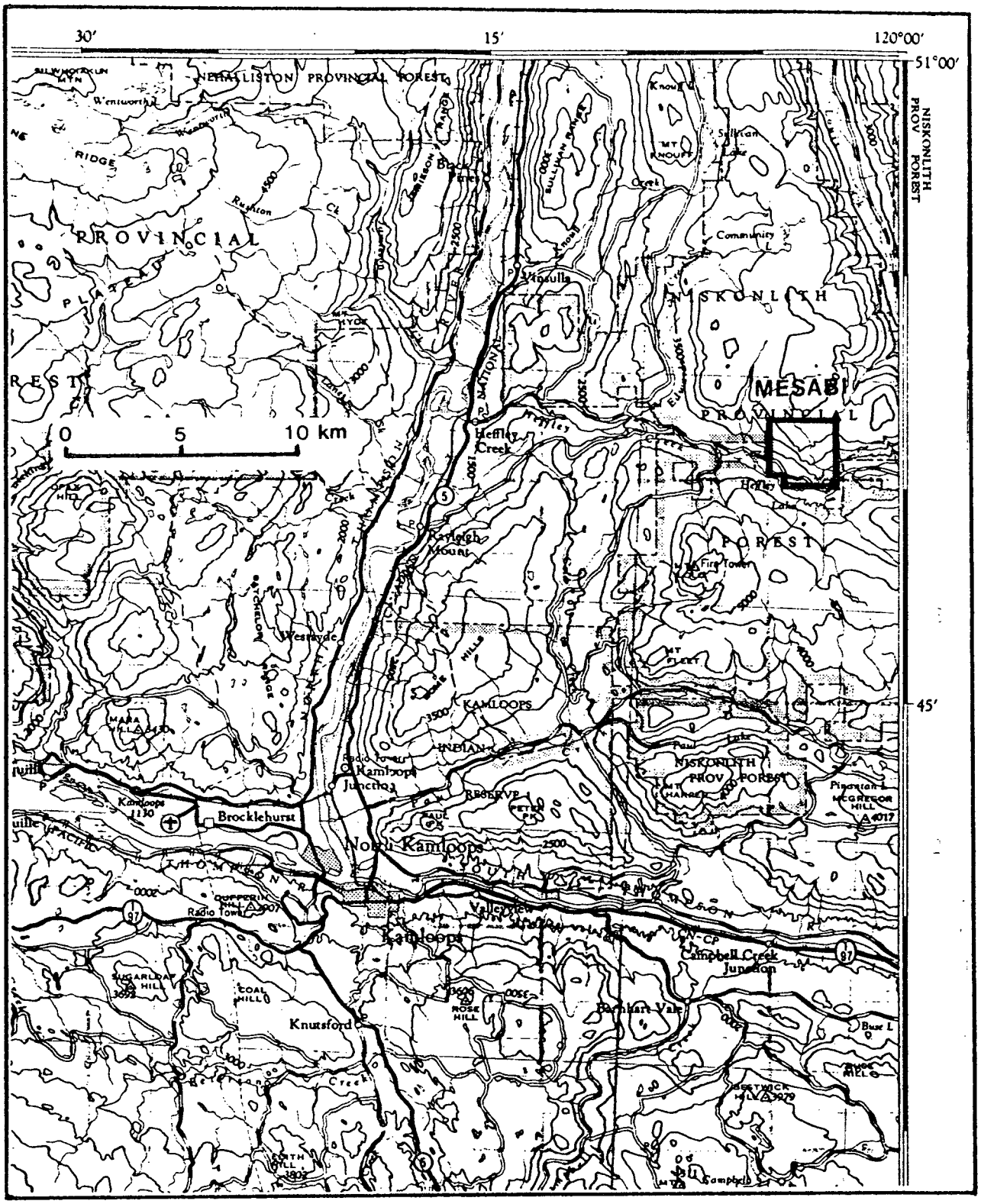

FIGURE 2 - LOCATION - MESABI PROPERTY

History

Copper-iron mineralization north of Heffley Lake was first investigated by surface cuts prior to 1915. Subsequent work through the 1940's on what became known as the Iron Range property consisted of trenching and sampling.

Madison Oils Limited acquired claims in the area in late 1964 and completed magnetometer and soil geochemical surveys and 255 metres of diamond drilling in 4 vertical holes in 1965 (Sheppard,1966a,b).

Western Canada Steel Limited held claims in the area between 1970 and 1973 and conducted geological mapping programs and magnetometer and VLF-EM surveys (Black,1970,1973).

H. Allen held the property in 1976 and reportedly deepened one of the previous drilled holes to a depth of 94 metres.

Cominco Ltd. staked claims covering the area of the present property in 1979 and completed 35 km of line-cutting, geological mapping and a magnetometer survey and the collection and analyses of 1052 soil samples in 1980 (Casselman,1980).

Present Status

The MESABI mineral claim was located by R.H. McMillan

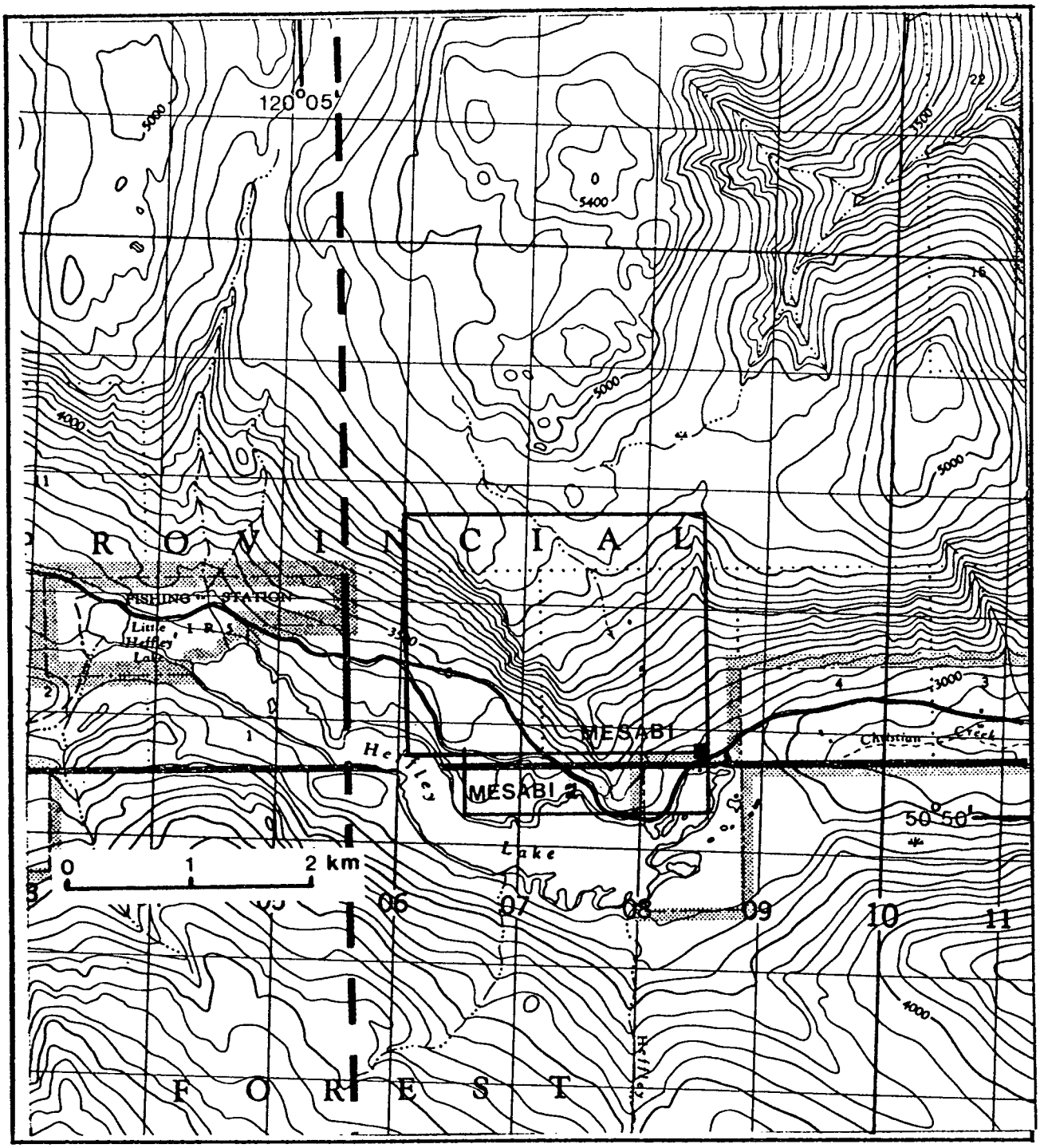

FIGURE 3 - MESABI MINERAL CLAIMS

April 21,1993 on behalf of the Mesabi Syndicate. The MESABI 2 mineral claim was located during the course of an April 13 and 14 field program on the MESABI mineral claim carried out by N.C. Carter and R.H. McMillan on behalf of Formation Capital Corporation. This work consisted of 3.5 line km of VLF-EM and magnetometer surveys and the collection and analyses of nine rock samples in the central property area.

GEOLOGY AND MINERALIZATION

Physical Setting

The Heffley Lake area is near the northeastern margin of the Thompson Plateau, the southernmost physiographic subdivision of the Interior Plateau.

Heffley Creek and Heffley Lake occupy a broad valley extending eastward from the Thompson River valley (Figure 2). Elevations within the MESABI property range from 900 metres above sea level at Heffley Lake to more than 1400 metres along the northern property boundary (Figure 3). The property is locally rugged with prominent southwest-facing cliff faces north of the highway.

Much of the claims area is forested by pine and fir. Overburden cover is extensive marginal to Heffley Lake with bedrock exposures retricted to topographically higher areas

of the property.

Regional Geological Setting

The Heffley Lake area, near the boundary between the Intermontane and Omineca Crystalline tectonic belts, is underlain by Quesnel Terrane volcanic and sedimentary assemblages of late Paleozoic to early Mesozoic age.

Originally mapped as part of the Carboniferous - Permian Cache Creek Group (Cockfield,1947) and more recently as the Thompson Assemblage (Okulitch,1978), layered rocks in the area northeast of Kamloops are now regarded (Gabrielse and Yorath,1992) as being part of the Harper Ranch subterrane which forms the basement of Quesnel Terrane. The most common lithologies within this 2000 metre thick assemblage of late Devonian to late Permian age include argillites (cherty in part), siltstones and calcareous units. Intercalated with the sediments are volcanic clastic and flow rocks consisting of altered basalts and cherty tuffs, some of which may be in-faulted slices of late Triassic Nicola Group rocks. Mafic stocks and dykes are interpreted as being coeval with the volcanic rocks.

Harper Ranch subterrane assemblages are considered to have been deposited in a basin distal to an active volcanis island arc.

Property Geology and Mineralization

The MESABI property is underlain by a northwest-striking steeply dipping volcanic and sedimentary sequence which is intruded by a poorly exposed gabbroic stock and by north to northeast trending andesite and diorite dykes. The following summary lithologic descriptions are after Casselman(1980).

The apparent oldest unit, underlying much of the eastern half of the current MESABI claim, consists of andesite pyroclastics and flows with subordinate felsic volcanics and intercalated argillaceous siltstones. This unit is apparently overlain by a sedimentary sequence comprised of thin to thickly bedded limestones and lesser argillites which underlies the the prominent cliffs in the western property area. The sediments are cut by diorite and andesite dykes and by a mafic (gabbroic) stock which, based on previous magnetic survey results, it thought to underlie the extreme western and southwestern parts of the MESABI 2 and MESABI claims respectively.

Between the mafic stock and the relatively unaltered sedimentary sequence is the so-called "Mineral Horizon" (Casselman,1980) which consists of limestone and calc-silicate (skarn) horizons with lesser intercalated argillaceous siltstone and volcanic tuff horizons. This altered sedimentary sequence is interpreted as being

separated from unaltered limestones by a northwest trending fault along the base of the prominent cliffs.

Two varieties of calc-silicate alteration have been identified within the so-called "Mineral Horizon" (Casselman,1980). These include a more widespread, green, pyroxene-rich variety which is non-mineralized and a garnet-bearing, reddish-brown variety containing pods and lenses of magnetite plus disseminations and streaks of pyrite-pyrrhotite and chalcopyrite, This latter variety is exposed in trenches and open-cuts in the central part of the MESABI claim (Figures 4 and 5).

This unit was also intersected in four 1965 diamond drill holes that reached bedrock within an area immediately south of the MESABI and MESABI 2 mutual claims boundary (Figures 4 and 5). No.2 hole reportedly (Sheppard,1966) intersected massive magnetite with chalcopyrite between 6.4 and 17.4 metres (11.0 metres interval) grading 1.67% copper and 0.50 g/t gold, followed by a 13.7 metres section grading 13.0% iron and 0.11% copper. Similar copper grades were evident in the succeeding 7.9 metres section and then declined to 0.04% at the end of the hole at a depth of 46.3 metres. According to Sheppard(1966), visible mineralization in another two holes drilled in this area was of the same tenor as that of No.2 while a fourth hole contained five 1.5

metre sections with grades of between 21.54 and 48.50% iron and trace to 0.16% copper between hole depths of 25.3 and 92.0 metres. These mineralized sections are separated by 8 to 23 metres intervals of of altered volcanics and argillaceous siltstones. Sheppard(1966) suggests that the four holes were drilled in the footwall of the Cu-Fe zone.

A soil geochemical survey (Casselman,1980) indicated several areas with anomalous (+75 ppm Cu = threshold value) copper values. Two northerly trending, parallel anomalous areas are coincident with the "Mineral Horizon", have copper values of up to 1000 ppm Cu, measure 800 x 200 metres and 350 x 100 metres in plan and are east of, and upslope from, both the area of trenching and the previously drilled area.

While previous descriptions of drill core and observed mineralization in bedrock on the MESABI property suggest a skarn or contact metasomatic origin, the mineralization can properly be referred to as stratabound. Casselman(1980) proposes a syngenetic, volcanogenic origin for the carbonate-sulphide-oxide iron formation which has been subjected to post-mineral contact metamorphism.

BEDROCK SAMPLING

Nine character samples of magnetite-pyrite-pyrrhotite-chalcopyrite mineralization were collected from the trenched area in the western part of the MESABI claim (Figure 5). These samples were delivered to Eco-Tech Laboratories Ltd. in Kamloops where 30 element ICP analyses were performed. Gold values were determined by fire assay with atomic absorption finish on 30 gram sample splits. Complete results are listed in Appendix I. Sample locations are shown on Figure 4; sample descriptions plus copper, iron and gold values are as follows:

Sample Number - Description	Cu(ppm)	Fe(%)	Au(ppb)
10284 - skarn zone with pink garnet, some diopside; magnetite-pyrite, chalcopyrite as disseminations and in fractures	668	>15	65
10285 - as previous with 1 cm wide bands of chalcopyrite associated with garnet	1686	11.90	120
10286 - as previous - disseminated pyrrhotite in garnet-rich matrix	591	9.09	80
10287 - skarn with 15-40% pyrrhotite bands with minor chalcopyrite and some magnetite	1255	>15	25
10288 - limestone-andesite fault (035/90) contact - near massive pyrite-pyrrhotite (chalcopyrite) stringers in andesite along fault	1914	>15	110
10289 - lenses and bands of garnet, + pyrite-pyrrhotite-chalcopyrite	3570	>15	50

Sample Number - Description	Cu(ppm)	Fe(%)	Au(ppb)
10290 - as previous	2029	>15	105
10291 - skarn zone - garnet-epidote-pyrrhotite-pyrite-chalcopyrite	1434	9.94	55
10292 - parallel 0.3m garnet skarn zones with disseminated sulphides marginal to 060/90 fractures	407	7.45	5

Other base metal and trace element values were low as indicated in Appendix I.

MAGNETOMETER SURVEY

The magnetometer survey was conducted over 3.5 line km along three east-west flagged lines at 200 to 300 metre spacings in the southern part of the MESABI claim (Figure 4). A McPhar M700 fluxgate magnetometer (serial no.7409) was used for the survey and readings in gammas were taken at 50 metre intervals along lines 0N, 3N and 5N. Values of magnetic susceptibility shown on Figure 4 have been corrected for diurnal magnetic variation.

Anomalous values, exceeding a background of 8100 gammas, were found on line 0N between 1000 and 1300W and are in general agreement with an area of higher magnetic susceptibility identified by previous Cominco surveys (Casselman,1980). One other high reading, on line 5N at 250E (Figure 4), is coincident with magnetite mineralization

exposed in a road cut.

VLF-EM SURVEY

The VLF (very low frequency) method makes use of powerful radio transmitters set up in various parts of the world for military purposes. These transmitters induce electric currents in conductive bodies thousands of kilometres away. These induced currents produce secondary magnetic fields which can be detected at surface through deviations of the normal VLF field. The magnetic component of the VLF primary field is horizontal. Local conductivity inhomogeneities add vertical components.

A Geonics Limited EM16 unit (serial no.140) was used to conduct the survey over three flagged east-west lines at 200 to 300 metre spacings in the southern part of the MESABI claim (Figure 5). Two VLF transmitting stations, Jim Creek (Seattle) WA (24.8 khz) and Cutler ME (24.0 khz), were used for this survey; readings along line 0N were taken on the Jim Creek frequency April 13 while readings along lines 3N and 5N utilized the Cutler frequency April 14 when the Jim Creek frequency was inoperative. Readings of in-phase and quadrature phase components of the vertical magnetic field as a percentage of the horizontal primary field, recorded at 50 metre stations along the three flagged lines, are shown on

Figure 5.

These data indicate the presence of a northwest trending conductive zone extending from line 0N,1000E, through line 3N,400E to line 5N,500E. This zone is further reflected by Fraser Filter contouring of data (Figure 5) which also shows a split of higher values along line 0N. A second area of higher Fraser Filter values appears to be developing near the eastern extremities of line 5N.

CONCLUSIONS AND RECOMMENDATIONS

Sampling of previously trenched areas in the western part of the MESABI claim confirms the presence of copper-iron values within apparent skarn zones. Low gold values are associated with this exposed mineralization.

The magnetometer survey was successful in locating the northern part of a previously defined 700 x 800 metre area of high magnetic response relative to the current claim boundaries. The VLF-EM survey partially defined a 700 metre long conductive zone, the southern part of which is coincident with the area of higher magnetic response. This conductive zone, which open along strike, flanks the trenched area to the northwest and appears to straddle the area of previous drilling to the south (Figure 5). The zone is also coincident with anomalous copper in soils values indicated by

previous surveys.

The MESABI property is considered to be prospective for Besshi-type volcanogenic massive sulphide mineralization which, within part of the property area, has a skarn overprint. Encouraging results to date confirm and elaborate on results of previous investigations and additional exploratory work is warranted. It is recommended that magnetometer and EM surveys be extended to cover the entire property area prior testing by diamond drilling.

COST STATEMENT

Wages	
N.C. Carter, R.H. McMillan - April 11,13,14,15,1994:	
3 days @ $400/day x 2	$2,400.00
Transportation	
Vehicle - 4 days @ $60/day	$240.00
- 1025 km @ $0.20/km	$205.00
- Gasoline	$66.96
- Ferry	$67.00
- Highway tolls	$20.00
	$598.96
Accomodation, Meals	
April 11 - 15,1994	$428.20
Equipment Rentals	
Geonics EM16 - 2 days @ $50	$100.00
McPhar M700 Magnetometer - 2 days @ $50	$100.00
	$200.00
Miscellaneous Supplies	
Flagging tape, topofill,etc.	$50.00
Analytical Charges	
9 rock samples - ICP + Au geochem @ $18.99/sample	$170.93
Report Preparation	
N.C. Carter - 1.5 days @ $400.00	$600.00
Preparation of diagrams, duplicating	$89.07
	$689.07
TOTAL EXPENDITURES	$4,537.16

REFERENCES

Black,J.M.(1970a): Geological and Geophysical Report, Nan 1 and 2 Claims, Heffley Lake, BCMEMPR Assessment Report 2597

_____(1970b): Geological and Geophysical Report, Eve 3 and 4 Claims, Heffley Lake, BCMEMPR Assessment Report 2600

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Casselman,M.J.(1980): Assessment Report of Linecutting and Geological, Soil Geochemical and Magnetometer Surveys on the Heff Lake Property, Heffley lake Area, Kamloops Mining Division, B.C., BCMEMPR Assessment Report 8246

Cockfield,W.E.(1947): Nicola, Geological Survey of Canada Map 886A

Gabrielse,H. and Yorath,C.J.(1992): Geology of the Cordilleran Orogen in Canada, Geological Survey of Canada, Geology of Canada No.4,pp.292-293

Okulitch,A.V.(1978): Thompson-Shuswap-Okanagan, Geological Survey of Canada Open File 637

Sheppard,E.P.(1966a): Geophysical Report on the HAL Group of Claims, Heffley Lake, B.C., BCMEMPR Assessment Report 820

_____(1966b): Geological Report on the HAL Group of Claims, Heffley Lake, B.C., BCMEMPR Assessment Report 821

AUTHOR'S QUALIFICATIONS

I, NICHOLAS C. CARTER, of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1966.

2. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S.(1962) and the University of british Columbia with Ph.D.(1974).

3. I have practised my profession in eastern and western Canada and in parts of the United States for more than 25 years.

4. The geochemical and geophysical surveys of the MESABI property as dfescribed in the foregoing report were carried out by the undersigned and R.H. McMillan April 13 and 14,1994.

N.C. Carter, Ph.D. P.Eng.

APPENDIX I

Analytical Results

ECO-TECH LABORATORIES LTD.
10041 E.T.C.HWY RR#2
KAMLOOPS, B.C. V2C 2J3
PHONE - 604-573-5700
FAX - 604-573-4557

N.C. CARTER ETK 94-198
1410 WENDE ROAD
VICTORIA, B.C.
V8P 5T5

APRIL 26, 1994

9 ROCK SAMPLES RECEIVED APRIL 14, 1994

VALUES IN PPM UNLESS OTHERWISE REPORTED

ET#	DESCRIPTION	AU(ppb)	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
1	- 10284	65	1.6	1.42	<5	10	95	<5	6.34	<1	104	129	668	> 15	.08	<10	.12	1357	2	<.01	24	1040	<2	20	<20	26	.05	20	41	<10	<1	31
2	- 10285	120	1.0	1.25	<5	10	55	<5	8.77	<1	102	167	1686	11.90	.02	<10	.05	1231	9	<.01	33	1700	<2	15	<20	41	.08	<10	42	<10	8	20
3	- 10286	80	<.2	1.87	60	12	80	<5	12.50	<1	53	140	591	9.09	.08	<10	.17	1992	9	<.01	18	1020	<2	10	<20	38	.10	<10	58	<10	8	16
4	- 10287	25	1.8	.97	<5	10	110	<5	7.26	<1	116	124	1255	> 15	.18	<10	.10	951	2	<.01	36	1200	<2	<5	<20	64	.05	30	42	<10	<1	14
5	- 10288	110	1.4	.93	<5	14	75	<5	3.61	<1	263	56	1914	> 15	.01	<10	<.01	869	<1	<.01	93	730	<2	30	<20	<1	.03	<10	10	20	<1	14
6	- 10289	50	4.6	1.46	<5	8	<5	<5	9.09	<1	150	138	3570	> 15	.19	<10	.26	1587	3	<.01	53	1490	<2	15	<20	62	.08	80	32	<10	3	23
7	- 10290	105	1.4	.85	<5	12	125	<5	12.10	<1	84	68	2029	> 15	.11	<10	.07	942	<1	<.01	27	1260	<2	<5	<20	121	.06	<10	40	<10	<1	14
8	- 10291	55	<.2	2.06	<5	14	<5	<5	11.10	<1	62	197	1434	9.94	.04	<10	.14	1816	16	<.01	17	1060	14	<5	80	13	.11	<10	86	190	8	17
9	- 10292	5	<.2	1.56	<5	8	115	<5	11.90	<1	44	117	407	7.45	.10	<10	.21	1548	5	.01	12	1290	2	5	<20	88	.08	<10	43	20	9	12
QC/DATA:																																
REPEAT #:																																
1	- 10284		1.8	1.53	<5	10	95	<5	6.73	<1	115	152	692	> 15	.07	<10	.10	1444	5	<.01	26	1110	<2	15	<20	27	.06	50	42	<10	1	33
STANDARD 1991			1.6	1.97	60	8	180	<5	1.76	<1	20	64	87	3.96	.37	<10	.94	662	<1	.02	26	600	16	10	<20	65	.12	20	77	<10	12	76

NOTE: < = LESS THAN
> = GREATER THAN

SC94/Rmisc

ECO-TECH LABORATORIES LTD.
per FRANK J. PEZZOTTI, A.Sc.T.
B.C. Certified Assayer

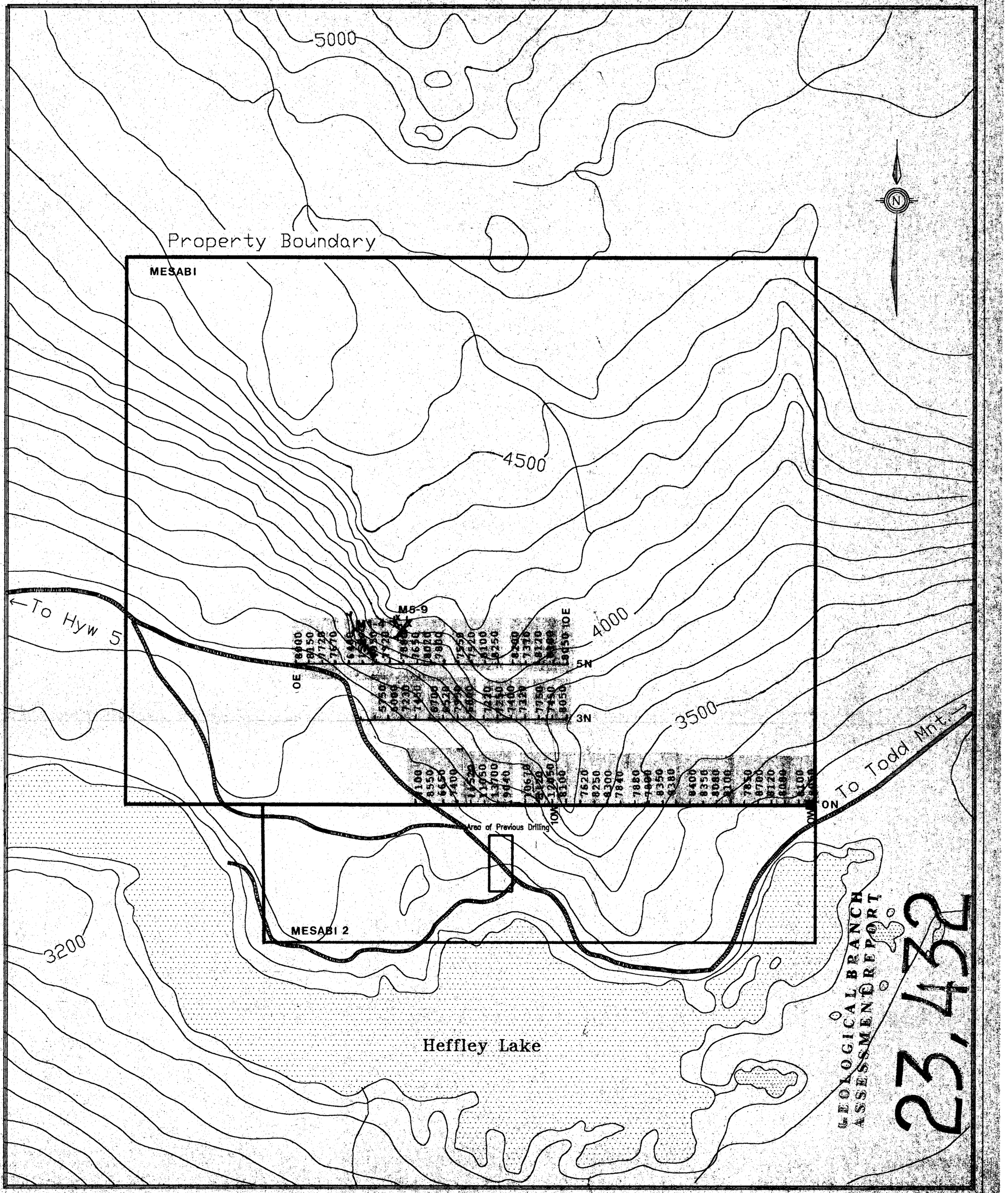
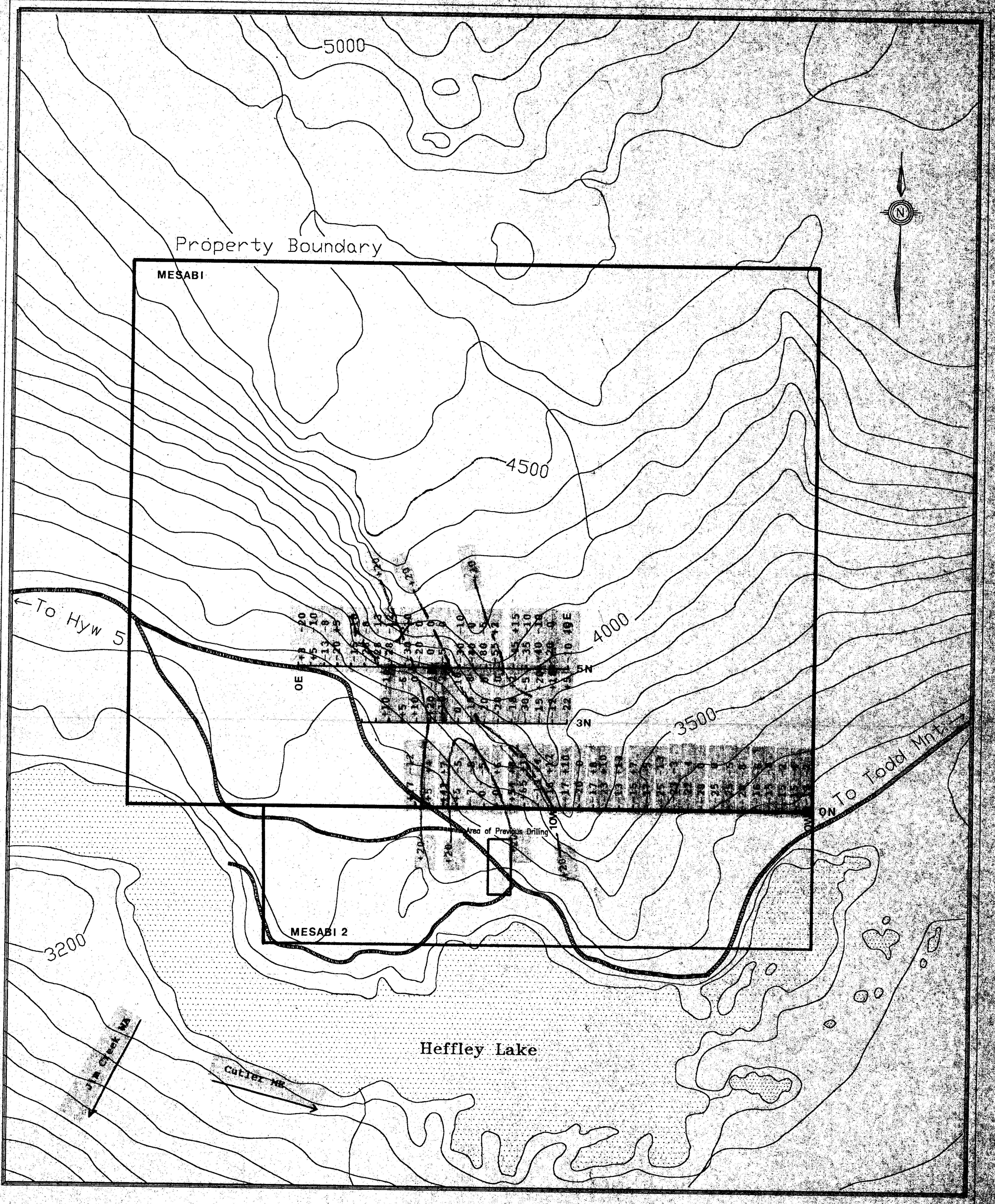


FIGURE 4 MAGNETOMETER SURVEY, BEDROCK SAMPLING

10600 - Compiled

2MESABI.PIC



0 250 500 750 1000

Metres

2MESABI PLC

MESABI SYNDICATE

FORMATION CAPITAL CORPORATION

COMPLETED DATE:	DRAFTED DATE:
	April 1994
REVISED DATE:	REVISED DATE:
SCALE:	1:5,000
	1:10,000
	DWG # 1

MESABI PROJECT

Topograhic Base Map

Kamloops Mining Division
NTS 92I/10E, Central British Columbia, Canada

NOTE Topographic contours in feet asl

FIGURE 5 VLF-EM SURVEY

Transmitter Stations: Jim Creek (Seattle) WA
Cutler ME

Trenches

-17 +10 - In-Phase, Quadrature (%)

Fraser Filter Contours